

## CLAIMS

1. A method for constructing an acoustic absorbing panel, comprising the steps of:

providing a first partition between a first region and a second region, the first partition being acoustically penetrable, and the second region comprising an acoustic absorbing material that is substantially free of fibrous glass; and

providing a second partition between the second region and a third region.

2. The method of claim 1, wherein the third region comprises an acoustic absorbing material; and the method further comprises the step of providing a third partition between the third region and a fourth region, the third partition being acoustically penetrable.

3. The method of claim 2, wherein the acoustic absorbing material in the third region is substantially free of fibrous glass.

4. The method of claim 2, wherein the second partition is substantially supported from movement by the acoustic absorbing materials in the second and third regions.

5. The method of claim 2, wherein the second partition is substantially acoustically impenetrable to provide substantial acoustic isolation between the second and third regions.

6. The method of claim 1, further comprising the steps of:

providing an acoustically penetrable membrane between the first partition and the second region.

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7. The method of claim 6, wherein the membrane is adhered to a surface of the first partition by elevating the temperature of the membrane, followed by cooling the membrane to an ambient temperature.

8. The method of claim 7, wherein the temperature of the membrane is elevated during a process of applying a coating on a surface of the first partition.

9. An acoustic absorbing structure, comprising:

a first partition between a first region and a second region, the first partition being acoustically penetrable, and the second region comprising an acoustic absorbing material that is substantially free of fibrous glass; and

a second partition between the second region and a third region.

10. The structure of claim 9, wherein the third region comprises an acoustic absorbing material; and the structure further comprises a third partition between the third region and a fourth region, the third partition being acoustically penetrable.

11. The structure of claim 10, wherein the acoustic absorbing material in the third region is substantially free of fibrous glass.

12. The structure of claim 10, wherein the second partition is substantially supported from movement by the acoustic absorbing materials in the second and third regions.

13. The structure of claim 10, wherein the second partition is substantially acoustically impenetrable to provide substantial acoustic isolation between the second and third regions.

14. The structure of claim 9, further comprising:

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an acoustically penetrable membrane between the first partition and the second region.

15. The structure of claim 14, wherein the membrane is adhered to a surface of the first partition by elevating the temperature of the membrane, followed by cooling the membrane to an ambient temperature.

16. The structure of claim 15, wherein the temperature of the membrane is elevated during a process of applying a coating on a surface of the first partition.

17. The structure of claim 10, further comprising:

an acoustically penetrable membrane between the third partition and the third region.

18. The structure of claim 19, wherein the membrane is adhered to a surface of the third partition by elevating the temperature of the membrane, followed by cooling the membrane to an ambient temperature.